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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,434	11/15/2000	Edwin X. Graf	VOI0164.US	3225

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07/29/2003

EXAMINER

JAGAN, MIRELLYS

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/713,434

Applicant(s)

GRAF ET AL.

Examiner

Mirellys Jagan

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,306,258 to Lange in view of U.S. Patent 5,830,316 to Ampulski.

Lange discloses a press system for a paper web disposed to travel between an upper material and a lower material, the system having:

a support roll positioned underneath the web, and

a press apparatus having:

a pressure body, the pressure body and the support roll defining a nip therebetween, the pressure body having leading and trailing arms with a seal mounted on a distal end of each arm for contacting the upper material in nipping engagement over the support roll surface, wherein the upper material is interposed between the paper web and the pressure body of the press apparatus and the seal has an outer surface contoured to conform with the support roll by having a radius of curvature at least as large as the radius of curvature of the support roll surface, the support roll comprising a rotatable support roll having a cylindrical support surface,

an air chamber for applying pressurized air to the upper material,

a frame moveably supporting the pressure body,

an actuator comprising at least one flexible tube operatively disposed between the frame and the pressure body for moving the pressure body toward and away from the support roll by expanding and contracting with pressurized air to control the nip pressure, and

a controller that controls the nip width and the pressure with which the pressure body is pressed against the upper fabric at the nip by changing the amount of pressurized air in the actuator to cause the actuator to move the pressure body toward or away from the support roll, thereby controlling the nip width and the pressure at the nip between the pressure body and the support roll.

Lange discloses that it is important to control the pressure with which the pressure body presses against the web at the nip because too little pressure will create a larger nip width which will prevent a proper seal from forming at the nip, and too much pressure at the nip will create a smaller nip width which can damage the web (see column 5, lines 2-13, and column 6, lines 53-62).

Lange does not disclose a pressure sensor being mounted in one of the seals of the press apparatus to produce a signal indicative of a pressure on the web as the web is passed through the nip adjacent the sensor and the controller being linked to the sensor to determine the width of the nip as a function of the pressure sensed by the sensor.

Ampulski discloses a press system for controlling the nip width of a paper web press, the system having:

a pressure transducer mounted in a press shoe for producing a signal indicative of a pressure on the paper web as the paper web is passed through the nip, and

a controller linked to the sensor for determining the if the nip width is appropriate based on the pressure sensed by the transducer, and causing an actuator of the press shoe to adjust the press shoe to control the nip width based on the pressure.

Ampulski discloses that placing a pressure transducer in a nip of a web press is beneficial since it allows a pressure of the nip to be obtained and allows the nip width to be controlled based on the sensed pressure while the press is running, which prevents the web from being damaged and reduces downtime by allowing the nip width of the press apparatus to be adjusted during continuous operation of the press apparatus (see figure 4).

Referring to claim 1, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pressure system disclosed by Lange by adding a pressure transducer to a seal, as taught by Ampulski, to properly control the pressure with which the pressure body presses against the web at the nip and maintain a proper nip width that maintains a proper seal and prevents the web from being damaged.

3. Claims 2, 4, and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange and Ampulski, as applied to claims 1, 3, 5, and 6 above, and further in view of U.S. Patent 6,387,218 to Graf.

Lange and Ampulski disclose a system having all of the limitations of claims 2, 4, and 7-11, as stated above in paragraph 8, except for the upper and lower materials being a belt and a felt, respectively.

Graf discloses a press system for a paper web that is disposed to travel between an upper material and a lower material. The upper material is a belt and the lower material is a felt. Graf teaches that it is beneficial to utilize a belt and a felt to remove excess water from the web.

Referring to claims 2, 4, 7, and 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system disclosed by Lange and Ampulski by replacing the upper material with a belt and the lower material with a felt, as taught by Graf, in order to remove excess water from the web.

4. Claim 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange in view of Ampulski and Graf.

Lange discloses a press system for a paper web disposed to travel between an upper material and a lower material, the system having:

- a support roll positioned underneath the web, and

- a press apparatus having:

- a pressure body, the pressure body and the support roll defining a nip therebetween, the pressure body having leading and trailing arms with a seal mounted on a distal end of each arm for contacting the upper material in nipping engagement over the support roll surface, wherein the upper material is interposed between the paper web and the pressure body of the press apparatus and the seal has an outer surface contoured to conform with the support roll by having a radius of curvature at least as large as the radius of curvature of the support roll surface, the support roll comprising a rotatable support roll having a cylindrical support surface,

- an air chamber for applying pressurized air to the upper material,

a frame moveably supporting the pressure body,  
an actuator comprising at least one flexible tube operatively disposed between the frame and the pressure body for moving the pressure body toward and away from the support roll by expanding and contracting with pressurized air to control the nip pressure, and

a controller that controls the nip width and the pressure with which the pressure body is pressed against the upper fabric at the nip by changing the amount of pressurized air in the actuator to cause the actuator to move the pressure body toward or away from the support roll, thereby controlling the nip width and the pressure at the nip between the pressure body and the support roll.

Lange discloses that it is important to control the pressure with which the pressure body presses against the web at the nip because too little pressure will create a larger nip width which will prevent a proper seal from forming at the nip, and too much pressure at the nip will create a smaller nip width which can damage the web (see column 5, lines 2-13, and column 6, lines 53-62).

Lange does not disclose a pressure sensor being mounted in one of the seals of the press apparatus to produce a signal indicative of a pressure on the web as the web is passed through the nip adjacent the sensor and the controller being linked to the sensor to determine the width of the nip as a function of the pressure sensed by the sensor, and the upper material being one of a belt and a felt.

Ampulski discloses a press system for controlling the nip width of a paper web press, the system having:

a pressure transducer mounted in a press shoe for producing a signal indicative of a pressure on the paper web as the paper web is passed through the nip, and

a controller linked to the sensor for determining the if the nip width is appropriate based on the pressure sensed by the transducer, and causing an actuator of the press shoe to adjust the press shoe to control the nip width based on the pressure.

Ampulski discloses that placing a pressure transducer in a nip of a web press is beneficial since it allows a pressure of the nip to be obtained and allows the nip width to be controlled based on the sensed pressure while the press is running, which prevents the web from being damaged and reduces downtime by allowing the nip width of the press apparatus to be adjusted during continuous operation of the press apparatus (see figure 4).

Graf discloses a press system for a paper web that is disposed to travel between an upper material and a lower material. The upper material is a belt and the lower material is a felt. Graf teaches that it is beneficial to utilize a belt and a felt to remove excess water from the web.

Referring to claim 16, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pressure system disclosed by Lange by adding a pressure transducer to a seal, as taught by Ampulski, to properly control the pressure with which the pressure body presses against the web at the nip and maintain a proper nip width that maintains a proper seal and prevents the web from being damaged.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system disclosed by Lange by replacing the upper material with a belt and the lower material with a felt, as taught by Graf, in order to remove excess water from the web.



*Response to Arguments*

5. Applicant's arguments with respect to claims 1-11, 16, and 17 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent discloses a press having a pressure transducer:  
U.S. Patent 5,798,024 to Odell et al

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 703-305-0930. The examiner can normally be reached on Monday-Thursday from 8AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 703-308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7725 for regular communications and 703-308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

mj  
July 23, 2003



**Diego Gutierrez**  
**Supervisory Patent Examiner**  
**Technology Center 2800**